

IN THE CLAIMS:

Please AMEND claim 15 as follows.

1. (Previously Presented) An exposure apparatus, comprising:

an illumination optical system for illuminating a pattern of a reticle with laser light outputted from a continuous emission laser;

a projection optical system for projecting the illuminated pattern onto a subject to be exposed; and

an interferometer, of a Fizeau type, being operable while using laser light outputted from said continuous emission laser.

2. (Original) An apparatus according to Claim 1, wherein said interferometer includes a reflection member disposed on a stage for holding the subject.

3. (Original) An apparatus according to Claim 1, wherein said interferometer is operable to form an interference fringe for measurement of the wavefront aberration of said projection optical system.

4. (Original) An apparatus according to Claim 1, wherein said continuous emission laser is a continuous emission excimer laser having an emission wavelength of 193 nm or 157 nm.

5. (Cancelled)

6. (Original) An apparatus according to Claim 1, further comprising a stabilization mechanism for stabilizing the emission wavelength of said continuous emission laser.

7. (Previously Presented) An apparatus according to Claim 1, further comprising a semi-transmission mirror, disposed between said continuous emission laser and said illumination optical system, for directing a portion of the laser light outputted from said continuous emission laser to said interferometer.

8. (Previously Presented) An apparatus according to Claim 7, further comprising an optical system operable to transform laser light outputted from said continuous emission laser into incoherent light and also to direct the incoherent light to the reticle, wherein said semi-transmission mirror is disposed between said continuous emission laser and said optical system, and wherein said semi-transmission mirror directs laser light not transformed into coherent light to said interferometer.

9. (Original) An apparatus according to Claim 1, further comprising an optical path switching mirror for interchanging the path of the laser light outputted from said continuous emission laser, between a light path directed to said illumination optical system and a light path directed to said interferometer.

10. (Previously Presented) An apparatus according to Claim 9, further comprising an optical system operable to transform laser light outputted from said continuous emission laser into incoherent light and also to direct the incoherent light to the reticle, wherein said optical path switching mirror is disposed between said continuous emission laser and said optical system, and said optical path switching mirror directs laser light not transformed into coherent light to said interferometer.

11. (Original) An apparatus according to Claim 1, further comprising a photoelectric converter for taking an image of an interference fringe produced by said interferometer, and an operation unit for analyzing an output of said photoelectric converter to control said projection optical system.

12. (Original) An apparatus according to Claim 1, further comprising a pulse emission laser for injecting laser light of a predetermined wavelength into said continuous emission laser.

13. (Original) A device manufacturing method, comprising the steps of:
exposing a wafer to a pattern by use of an exposure apparatus as recited in Claim 1; and
developing the exposed wafer.

14. (Previously Presented) An apparatus according to Claim 1, wherein said interferometer measures characteristics of said exposure apparatus.

15. (Currently Amended) An apparatus according to Claim 1, wherein said interferometer measures wavefront aberration of said projection optical ~~ssystem~~ system.